WHAT IS CLAIMED IS:

1. A wafer carrier opener comprising:

a wafer carrier door receiver adapted to receive a wafer carrier door;

a horizontally stationary member; and

a link coupled between the wafer carrier door receiver and the horizontally stationary member so as to allow horizontal movement of the wafer carrier door receiver.

2. The wafer carrier opener of claim 1 wherein the link comprises a pair of links coupled between the wafer carrier door receiver and the horizontally stationary member such that the wafer carrier door receiver, the horizontally stationary member, and the pair of links form a four-bar link.

3. The wafer carrier opener of claim 2 further comprising a counterbalance coupled to the horizontally stationary member and to the wafer carrier door receiver, the counterbalance adapted to bias the wafer carrier door receiver upwardly.

4. The wafer carrier opener of claim 3 wherein the counterbalance comprises a spring.

5. The wafer carrier opener of claim 1 further comprising a vertical motion stop and a mechanism coupled to the horizontally stationary member so as to move vertically therewith, and coupled to the wafer carrier door receiver so as to move horizontally therewith, the mechanism adapted so as to contact the vertical motion stop and to thereby be stopped from further vertical motion.

Fig 3

6. The wafer carrier opener of claim 5 wherein the link comprises a pair of links coupled between the wafer carrier door receiver and the horizontally stationary member such that the wafer carrier door receiver, the horizontally stationary member, and the pair of links form a four-bar link.

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7. The wafer carrier opener of claim 1 further comprising a counterbalance coupled to the horizontally stationary member and to the wafer carrier door receiver, the counterbalance adapted to bias the wafer carrier door receiver upwardly.

8. The wafer carrier opener of claim 7 further comprising a vertical motion stop and a mechanism coupled to the horizontally stationary member so as to move vertically therewith, and coupled to the wafer carrier door receiver so as to move horizontally therewith, the mechanism adapted so as to contact the vertical motion stop and to thereby be stopped from further vertical motion.

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9. The wafer carrier opener of claim 8 wherein the counterbalance comprises a spring.

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10. A wafer carrier opener comprising:

a wafer carrier door receiver adapted to receive a wafer carrier door;

a horizontally stationary member;

a cam follower 123, coupled to the horizontally stationary member so as to allow relative movement there between and fixedly coupled to the wafer carrier door receiver;

a stationary cam positioned so as to limit vertical motion of the cam follower;

a counterbalancing mechanism coupled to the horizontally stationary mechanism and to the wafer carrier door receiver and adapted to bias the wafer carrier door receiver upwardly;

an upper link, having a first joint and a second joint, wherein the first joint is coupled to the horizontally stationary member and the second joint is coupled to the wafer carrier door receiver so as to allow horizontal movement of the wafer carrier door receiver relative to the horizontally stationary member; and

a lower link, having a first joint and a second joint, wherein the first joint is coupled to the horizontally stationary member and the second joint is coupled both to the cam follower and to the wafer carrier door receiver so as to allow horizontal movement of the wafer carrier door receiver relative to the horizontally stationary member.

11. A method of opening a sealed wafer carrier, the method comprising:

elevating a wafer carrier door receiver assembly;

impacting a vertical motion stop with a portion of the wafer carrier door receiver assembly, thereby limiting the vertical motion of a portion of the wafer carrier door receiver assembly;

continuing elevating a remaining portion of the wafer carrier door receiver assembly, and

translating the continued elevation of the remaining portion of the wafer carrier door receiver assembly into horizontal motion of at least a door receiving

portion of the vertically limited portion of the wafer carrier door receiver assembly.

12. The method of claim 11 wherein impacting a vertical motion stop with a portion of the wafer carrier door receiver assembly thereby limiting the vertical motion of a portion of the wafer carrier door receiver assembly comprises:

placing a vertical motion stop adjacent the wafer carrier door receiver assembly wherein the wafer carrier door receiver assembly comprises a door receiving portion, a horizontally stationary member, a cam follower coupled to the door receiving portion and to the horizontally stationary member; and

impacting a vertical motion stop with the cam follower thereby limiting the vertical motion of the door receiving portion and the cam follower.

13. The method of claim 11 wherein translating the continued elevation of the remaining portion of the wafer carrier door receiver assembly into horizontal motion of at least a door receiving portion of the vertically limited portion of the wafer carrier door receiver assembly comprises:

linking at least a door receiving portion of the vertically limited portion of the wafer carrier door receiver assembly with the remaining portion of the wafer carrier door receiver assembly that continues to be elevated.

14. The method of claim 11 further comprising:

counterbalancing the downward gravitational force of at least a door receiving portion of the wafer carrier door receiver assembly.

15. A system adapted to receive a sealed wafer carrier and to open the sealed wafer carrier, the system comprising:

the wafer carrier opener of claim 1; and

a wafer carrier platform, adapted to receive a sealed wafer carrier, operatively coupled to the wafer carrier opener of claim 1.

16. A system adapted to process a wafer comprising:

a wafer carrier loading station having the wafer carrier opener of claim 1; and

a processing tool, coupled to the wafer carrier loading station, having at least one processing chamber.